



ONLINE GIFTED EDUCATION

Online education involves instruction through electronic communications media to persons engaged in learning in a place or time different from that of the instructor or other students and in which online interaction accounts for at least 50 percent of the graded part of the course. *Online instruction, distance learning via the Internet, e-learning, Web-based learning, virtual learning, and e-studies* are the terms usually used, interchangeably, in programs and research studies to describe essentially the same type of instruction. At the same time, lack of conceptual distinction among the above-mentioned terms means that programs identified by the same terms may vary significantly, and programs with different names may be quite similar.

Online programs for gifted students are programs specializing in service to the gifted population and offering enrichment, Advanced Placement (AP), or acceleration courses in online format. Some educational institutions offer several online classes, and others serve as online schools, educational organizations that offer K–12 courses through Internet- or Web-based methods. The types of online schools include university based, state sanctioned, consortium/collaborative, charter, and private. Most programs use more than one type of technology and blend them together in ways that create an optimal mix for effective online learning.

General Online K–12 Learning

Distance learning in the form of correspondence courses appeared as an educational option more than a century ago. Computer-based instruction emerged in the 1960s. With the increase in the use of personal computers in recent years, and the exponential growth of the Internet, online education offerings have grown significantly in popularity. In recent years, online education went through several stages and has taken the form of virtual schools. Recent surveys show that K–12 online learning is a rapidly growing phenomenon. According to a report by North Central Regional Educational Laboratory, more than 500,000 K–12 students are currently enrolled in online classes in all 50 U.S. states. Enrollments in K–12 online courses showed steady increase over the past 5 years. As of November 2005, the North American Council for Online Learning reported that its database contains 157 unique K–12 online learning programs in 42 states (including 32 virtual charter schools, 3 online homeschool programs, and 53 public noncharter virtual schools that offer programs). Utah Electronic High School alone, the nation's largest online learning program, serves more than 35,000 students. Florida Virtual School (FLVS) is the second largest online learning program and serves around 33,000 students.

According to the U.S. Department of Education, during the 2002–2003 school year, 36 percent of U.S. school districts (5,500 out of 15,040) had students enrolled in distance-education programs,

and 38 percent of public high schools (approximately 6,000) offered distance-education courses. Postsecondary institutions build on a long history of distance education and are the major providers of K–12 online learning. About 48 percent of public school districts reported an online education enrollment through a postsecondary institution in 2002–2003. According to J. Carl Setzer and Laurie Lewis, at least seven independent-study programs at universities have developed an online high school curriculum. Other postsecondary online K–12 learning programs originated in gifted education, dual enrollment, or early college credit.

Most attempts to define virtual schools distinguish them based on their operating unit. The problem, though, is that in such a way we miss a range of important elements and critical distinctions. Randall Greenway and Gregg Vanourek identified six defining dimensions of virtual schooling: comprehensiveness (complete program or discrete class offerings), reach (i.e., spanning over district, state, internationally), type (public, private, charter, contract, magnet, etc.), location (in school, at home, or a combination), delivery method (synchronous or asynchronous), and control (run by a school district, university, state, other provider, or combination). Another important dimension is type of interaction in online programs. It can be organized as independent study (one-on-one interaction between a student and an instructor) or group based (where in addition to interaction with the teacher, students participate in discussion groups with each other).

Online Learning for Gifted Students

Online education has emerged as an option for a number of special populations of learners whose needs are difficult to meet in the classroom. One such group is gifted students. In the past 10 years the online instructional methods have undergone some major changes, from simple downloading and posting of information to complex interactive courses and use of a wide range of multimedia. Online classes offer opportunities for learners whose needs are not met in the regular classroom but who are highly motivated to meet their educational goals—which describes nearly all gifted students. The literature shows that technology-enriched education of gifted students has been

directed primarily to four types of experiences: (a) university-based programs, (b) specialized schools both private and public, (c) homeschooling, and (d) technology-based options. Del Siegle states that there are six different types of learning activities for gifted and talented students using the Internet: information resources, e-books, interactive projects, online classes, publishing platforms, and mentoring resources.

Literature on effective practices for working with gifted students shows that they need to learn at their own speed; skip over work they already know and understand; study topics of interest beyond basic schoolwork; and work with abstract concepts that require advanced thinking skills. The online environment provides them such an opportunity. Gifted learners like to take command of their own learning, master more things in shorter periods of time, and do not rely on being taught but like to take the initiative. From this perspective, such advantages of online instruction as flexibility of time and place of learning, more learner control, exposure to innovations, and optimization of learning rate make online classes appealing to gifted learners. In addition to the above-mentioned factors, one of the major advantages of online instruction is in reducing the social isolation of individuals who do not have gifted education programs in the area of their residence.

From the philosophy of different online education programs, it can be inferred that gifted students are expected to possess more self-motivation, and be able to take personal responsibility for learning. The need for self-direction is one of the biggest differences between a course offered in an independent learning environment and the course offered in the regular environment. More freedom and personal responsibility for the learning process and individualized attention are the things that most attract gifted students to such opportunities. Generally, distance education is seen as an opportunity to enhance student autonomy and the intellectual community and to create a self-paced, expert-directed, time/place independent environment for learning.

Online Programs for Gifted Students

Academically gifted children have the desire to learn beyond the level of instruction that many

local school districts can offer. In response to their needs, several universities have initiated online learning programs to meet their unique needs. Such universities as Duke University, Johns Hopkins University, Northwestern University, the University of Missouri, Stanford University, and University of Iowa have online programs designed specifically for gifted and talented learners. Most of them offer independent study, AP, and enrichment online classes that have well-defined expectations for the participants in their program. Students use online courses to earn university credit before they begin their college education, earn extra credits in order to finish high school early, ease classroom scheduling conflicts, supplement schedules with courses not offered at their schools, enrich their high school experiences with more challenging courses, make up credits they lack to graduate on time, or even earn their high school diploma completely online.

Distance Education at the Center for Talented Youth, Johns Hopkins University

The Center for Talented Youth (CTY) at Johns Hopkins University, one of the pioneering programs in distance education for students of very high ability, opened its first distance education class in writing in 1984. Since then the program has grown to more than 6,000 enrollments per year and offers more than 45 courses in writing, mathematics, computer science, chemistry, physics, biology, psychology, and other subjects. Students who participate in CTY distance education classes come from all around the world. Mathematics courses are available to students beginning at age 5, and writing courses are open from Grade 5 and up. To become eligible to enroll in CTY's distance education, students need to show outstanding performance on above-grade tests in the subject of their strength. Students at CTY have many year-round options for advanced studies, including a wide range of AP courses, acceleration, and enrichment in the students' strongest areas.

The Center for Talented Youth, Talent Identification Program e-Studies, Duke University

The e-Studies Program at Duke's Talented Identification Program (TIP) is an online learning

opportunity for students in Grades 8–12. In this program, gifted students connect with other students and TIP instructors to pursue advanced high school and university-level coursework. These e-studies courses are delivered through the Blackboard course management system. Students in the e-Studies Program read course materials, post completed assignments, and interact with their peers and their instructor through online discussions, virtual lectures, and real-time collaborations. A variety of online classes in chemistry, psychology, writing, advanced mathematics, economics, science, and technology are available. Students are admitted to the program based on their scores on either the SAT or the ACT. Admission to courses in mathematics, computer science, science, and economics is based on math scores; admission to courses in the humanities and social sciences is based on verbal and reading scores. Students are expected to be committed to spend 10–14 hours per week on one online course. Most of the interactions in Duke TIP e-Studies courses are asynchronous, which means that students can participate by accessing the course online at a time different from their instructor or other students. Creators of the program claim that e-Studies courses at Duke allow students to benefit from a high level of interaction, while also allowing flexibility not found in most face-to-face classes.

Gifted LearningLinks Distance Learning Program, Center for Talent Development, Northwestern University

The Gifted LearningLinks distance learning program (LL) in the Center for Talent Development at Northwestern University has been in existence since 1982. In recent years this program evolved into an interactive online program offering a variety of courses to students in Grades 3 through 12. These online options are designed for students who can work independently and want to move quickly to advanced levels of coursework. Flexibility of scheduling is one of the biggest advantages of the Gifted LearningLinks program. Students have an option to enroll throughout the year in online high school honors and AP courses, take enrichment courses in math, science, and humanities beginning in Grade 3, or enroll in 6-week online high school accelerated honors courses during the summer.

Education Program for Gifted Youth, Stanford University

Since 1990, the online Education Program for Gifted Youth (EPGY) at Stanford University has served more than 50,000 gifted students. In 2006, Stanford University also opened the first university-based high school designed specifically for the gifted population. The first 30 gifted students started their comprehensive program in the fall of 2006 and are expected to receive their high school diploma completely online.

Using a combination of asynchronous and synchronous technologies, EPGY offers computer-based courses to students in Grades K–8. EPGY also provides curricular and instructional support, trainings, and course materials for schools that want to add an online component for gifted and talented students throughout the United States.

Independent Study Program, University of Missouri

Originally formed as an independent study division in 1911, the Center for Distance and Independent Study (CDIS) at the University of Missouri is known throughout the nation for its pioneering efforts in the field of distance and continuing education. In recent years the University of Missouri's Independent Study Program created online courses to enhance the courses with new and promising interactive technologies. Among a variety of courses, CDIS offers several challenging independent study courses designed specifically for academically talented middle school and high school students. CDIS courses give gifted students an opportunity to take courses in their academic interest and to complete them at their own pace. Typically, it takes students from 6 weeks to 9 months to complete their course work. Gifted students work on a challenging curriculum that promotes the construction of new knowledge through technology-based interactions. Courses integrate the traditional study guides with the vast resources of the Internet and with supplementary technologies.

Iowa Online Advanced Placement Academy, University of Iowa

Established in 2001, the Iowa Online Advanced Placement Academy (IOAPA) delivers AP courses

to high school students across the state of Iowa using Apex Learning online technology and the Iowa Communications Network. This program gives gifted high school students an opportunity to take college-level courses and exams. The focus of IOAPA is on helping accredited rural and small schools in Iowa. Students are eligible for enrollment in only one AP course per semester. The courses available are AP Calculus, AP Chemistry, AP English Language and Composition, AP English Literature and Composition, AP Physics, AP Statistics, and AP U.S. History.

Wisconsin Center for Academically Talented Youth

The Wisconsin Center for Academically Talented Youth (WCATY) is the North Central Association Commission on Accreditation and School Improvement accredited organization that has offered a versatile set of services to gifted children from elementary through high school statewide for almost 20 years. Among other year-round programs, WCATY offers district online cooperative courses (district Co-ops). District Co-ops combine online instruction and face-to-face workshops to allow academically talented students throughout a region or across a school district to learn together. District Co-op courses are run through the schools and school districts and are developed cooperatively. Co-ops can replace up to a quarter of the curriculum in the student's home school in one or more subject area. Co-ops typically run for 9 weeks and are designed to replace one hour of school each day. Students who take these online classes typically work independently in a resource room setting with Internet access, responding to assignments and classmates comments online, completing research, reading, and writing papers.

Future Directions

Rapid advancements in current computer technologies offer a lot of promising new directions for the online education of gifted students. Because the popularity of online classes among gifted students continues to grow, careful examination of current educational options for gifted students in the online environment needs to continue. Current online programs need to accumulate evidence of

best practices for working with gifted and talented students in online environment.

With online learning expanding to the K–12 setting, there is also a pressing need for a scientific discussion on the necessity of a framework of standards to provide support for guidance and evaluation of online programs for gifted students.

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See also Technology; Web-Based Learning

Further Readings

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